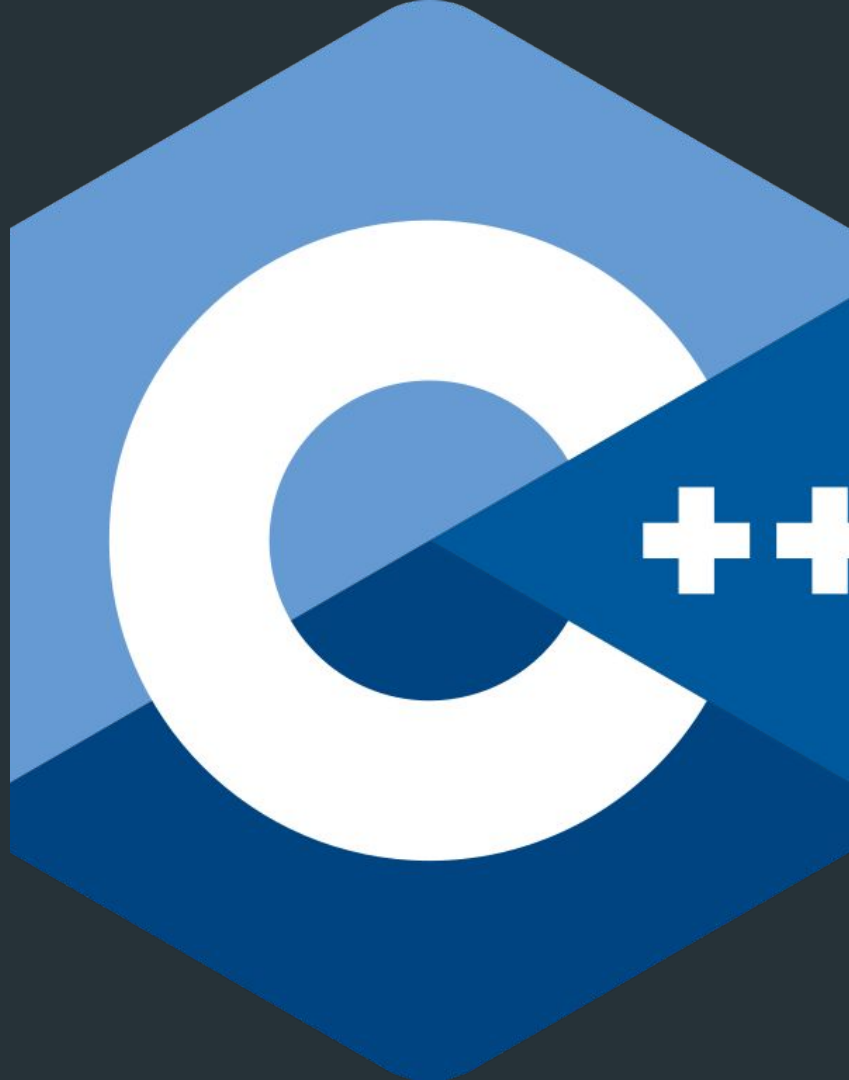


# C++ Workshop

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# Accessing the webpage

[https://www.onlinegdb.com/online\\_c++\\_compiler](https://www.onlinegdb.com/online_c++_compiler)

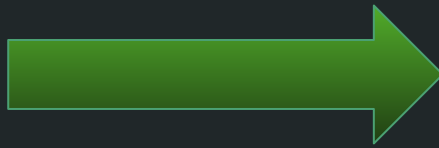


The screenshot displays the OnlineGDB website interface. On the left is a blue sidebar with navigation links: "IDE", "My Projects", "Classroom" (with a "new" badge), "Learn Programming", "Programming Questions", "Sign Up", and "Login". Below these are social media icons for Facebook and Twitter, and a "+ 42.1K" badge. The main area features a code editor with a dark background and light text. The code is a simple C++ program that prints "Hello World". Above the code editor is a toolbar with buttons for "Run", "Debug", "Stop", "Share", "Save", and "Beautify". The language is set to "C++". Below the code editor is an "input" section with a "Command line arguments:" field and "Standard Input" options: "Interactive Console" (selected) and "Text". At the bottom, there is an advertisement for "Read Ashtyn's story" with a "Learn more" link.

```
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```

```
#include <iostream>  
  
using namespace std;  
  
int main()  
{  
    cout<<"Hello World";  
  
    return 0;  
}
```

# Comparison between a script of C++ and Arduino



# Comparison

```
#include <iostream>
using namespace std;

int main()
{
    cout<<"Hello World";

    return 0;
}
```

```
void setup() {
    // put your setup code here, to run once:

}

void loop() {
    Serial.print("Hello");
    // put your main code here, to run repeatedly:

}
```

A close-up, slightly blurred photograph of a person's hands typing on a laptop keyboard. The laptop screen is visible in the upper right, displaying lines of code in a dark-themed editor. To the left of the laptop, a black coffee mug with a white logo is partially visible. The overall lighting is dim, suggesting an indoor setting at night or in a dimly lit room. A thin green horizontal line is drawn across the middle of the image, passing behind the text.

Challenge!

# Problems for you!

1. Write a program in C++ to print a welcome text in a separate line.
2. Write a program in C++ to print the sum of two numbers.
3. Write a program in C++ to print the sum of two numbers using variables.
4. Write a program in C++ to check whether a number is positive, negative or zero.
5. Write a program in C++ to calculate the volume of a sphere.
6. Write a program in C++ to display various type or arithmetic operation using mixed data type

A challenge:

Write a program in C++ that takes a number as input and prints its multiplication table up to 10.

1. Write a program in C++ to print a welcome text in a separate line.

### C++ Code :

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      cout << "\n\n Print a welcome text in a separate line :\n";
7      cout << "-----\n";
8      cout << " Welcome to \n" ;
9      cout << " w3resource.com "<<endl ;
10
11 }
```

2. Write a program in C++ to print the sum of two numbers.

### C++ Code :

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      cout << "\n\n Print the sum of two numbers :\n";
7      cout << "-----\n";
8      cout << " The sum of 29 and 30 is : "<< 29+30 << "\n\n" ;
9  }
```



3. Write a program in C++ to print the sum of two numbers using variables.

**C++ Code :**

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      cout << "\n\n Print the sum of two numbers :\n";
7      cout << "-----\n";
8      int a;
9      int b;
10     int sum;
11     a=29;
12     b=30;
13     sum=a+b;
14     cout << " The sum of "<< a << " and "<<b <<" is : "<< sum <<"\n\n" ;
15 }
```

4. Write a program in C++ to check whether a number is positive, negative or zero.

**C++ Code :**

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      signed long num1 = 0;
7      cout << "\n\n Check whether a number is positive, negative or zero :\n";
8      cout << "-----\n";
9      cout << " Input a number : ";
10     cin >> num1;
11     if(num1 > 0)
12     {
13         cout << " The entered number is positive.\n\n";
14     }
15     else if(num1 < 0)
16     {
17         cout << " The entered number is negative.\n\n";
18     }
19     else
20     {
21         std::cout << " The number is zero.\n\n";
22     }
23     return 0;
24 }
```

5. Write a program in C++ to calculate the volume of a sphere.

**C++ Code :**

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      int rad1;
7      float volsp;
8      cout << "\n\n Calculate the volume of a sphere :\n";
9      cout << "-----\n";
10     cout<<" Input the radius of a sphere : ";
11     cin>>rad1;
12     volsp=(4*3.14*rad1*rad1*rad1)/3;
13     cout<<" The volume of a sphere is : "<< volsp << endl;
14     cout << endl;
15     return 0;
16 }
```

## 6. Write a program in C++ to display various type or arithmetic operation using mixed data type

C++ Code :

```
1  #include <iostream>
2  #include <iomanip> // formatting floating-point numbers with 1 decimal place
3  using namespace std;
4
5  int main()
6  {
7      int m1 = 5, m2 = 7;
8      double d1 = 3.7, d2 = 8.0;
9
10     cout << "\n\n Display arithmetic operations with mixed data type :\n";
11     cout << "-----\n";
12     cout << fixed << setprecision(1);
13
14     cout << " " << m1 << " + " << m2 << " = " << m1+m2 << endl;
15     cout << " " << d1 << " + " << d2 << " = " << d1+d2 << endl;
16     cout << " " << m1 << " + " << d2 << " = " << m1+d2 << endl;
17
18     cout << " " << m1 << " - " << m2 << " = " << m1-m2 << endl;
19     cout << " " << d1 << " - " << d2 << " = " << d1-d2 << endl;
20     cout << " " << m1 << " - " << d2 << " = " << m1-d2 << endl;
21
22     cout << " " << m1 << " * " << m2 << " = " << m1*m2 << endl;
23     cout << " " << d1 << " * " << d2 << " = " << d1*d2 << endl;
24     cout << " " << m1 << " * " << d2 << " = " << m1*d2 << endl;
25
26     cout << " " << m1 << " / " << m2 << " = " << m1/m2 << endl;
27     cout << " " << d1 << " / " << d2 << " = " << d1/d2 << endl;
28     cout << " " << m1 << " / " << d2 << " = " << m1/d2 << endl;
29     cout << endl;
30     return 0;
31 }
```

Write a program in C++ that takes a number as input and prints its multiplication table up to 10

**C++ Code :**

```
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6  int a,i=0;
7      cout << "\n\n Print the multiplication table of a number upto 10:\n";
8      cout << "-----\n";
9      cout << " Input a number: ";
10     cin>> a;
11     for (i=1;i<=10;i++)
12     {
13         cout << a<<" x " << i << " = " <<a*i<<"\n" ;
14     }
15
16 }
```